Amendments to the Claims

Please amend Claims 1, 15, 18, 19, 21, 35, 38, 39 and 42. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Currently Amended) In a communication system having a signaling path in a wireless link between a first station and a second station, a method for adapting to rapid changes affecting the signaling path, comprising:

    in at least one station, calculating a metric indicative of a changing environment between the first and second stations as a function of a change in at least one modulation attribute of a signal transmitted across the wireless link between the first and second stations; and

    adjusting [[a]] at least one parameter affecting the performance of the wireless link to compensate for the rapid changes affecting the signaling path.

2. (Original) The method as claimed in Claim 1, wherein the first station is a base station and the second station is a mobile station, the metric being calculated by the mobile station.

3. (Original) The method as claimed in Claim 1, wherein the metric is indicative of motion of at least one of the stations.

4. (Original) The method as claimed in Claim 1, wherein the metric is indicative of motion of objects in the signaling path.

5. (Original) The method as claimed in Claim 1, wherein the metric is computed from a signal in an automatic gain control (AGC) loop in a receiver unit in one of the stations.

6. (Original) The method as claimed in Claim 5, wherein the metric is a function of a statistic of the signal in the AGC loop.

7. (Original) The method as claimed in Claim 6, wherein the statistic is variance.

8. (Original) The method as claimed in Claim 1, wherein the metric is computed from a phase error signal produced by a delay lock loop, matched filter, or correlator in a receiver unit in one of the stations.

9. (Original) The method as claimed in Claim 8, wherein the metric is a function of a statistic of the phase error signal.

10. (Original) The method as claimed in Claim 9, wherein the statistic is variance.

11. (Original) The method as claimed in Claim 1, wherein the metric is computed from a frequency error signal in a frequency control loop in a receiver unit in one of the stations.

12. (Original) The method as claimed in Claim 11, wherein the metric is a function of a statistic of the frequency error signal.

13. (Original) The method as claimed in Claim 12, wherein the statistic is variance.

14. (Original) The method as claimed in Claim 1, further including comparing the metric to a threshold level.

15. (Currently Amended) The method as claimed in Claim 1, wherein the at least one station has an antenna with an antenna mode such that the antenna mode is capable to be changed and wherein the step of adjusting includes changing an the antenna mode.

16.   (Original) The method as claimed in Claim 15, wherein the antenna mode changes from directive to omni-directional.

17.   (Original) The method as claimed in Claim 15, wherein the antenna mode changes from omni-directional to directive.

18.   (Currently Amended) The method as claimed in Claim 1, wherein the at least one parameter includes at least one of the following: a data transfer rate, a power level, an FEC coding rate, a modulation attribute, or an antenna characteristic.

19.   (Currently Amended) The method as claimed in Claim 18, wherein adjusting the at least one parameter includes reducing at least one of the following to a minimum level: the data transfer rate, the FEC coding rate, or the modulation attribute.

20.   (Original) The method as claimed in Claim 1, wherein the modulation attribute includes amplitude, frequency, phase, or combination thereof.

21.   (Currently Amended) In a communication system having a signaling path in a wireless link between a first station and a second station, an apparatus for adapting to rapid changes affecting the signaling path, comprising:

        in at least one station, a processing unit to calculate a metric indicative of a changing environment between the first and second stations as a function of a change in at least one modulation attribute of a signal transmitted across the wireless link between the first and second stations; and

        a compensator to adjust [[a]] at least one parameter affecting the performance of the wireless link to compensate for the rapid changes affecting the signaling path.

22.   (Original) The apparatus as claimed in Claim 21, wherein the first station is a base station and the second station is a mobile station, the processing unit being located in the mobile station.

23. (Original) The apparatus as claimed in Claim 21, wherein the metric is indicative of motion of at least one of the stations.

24. (Original) The apparatus as claimed in Claim 21, wherein the metric is indicative of motion of objects in the signaling path.

25. (Original) The apparatus as claimed in Claim 21, wherein the processing unit computes the metric from a signal in an automatic gain control (AGC) loop in a receiver unit in one of the stations.

26. (Original) The apparatus as claimed in Claim 25, wherein the metric is a function of a statistic of the signal in the AGC loop.

27. (Original) The apparatus as claimed in Claim 26, wherein the statistic is variance.

28. (Original) The apparatus as claimed in Claim 21, wherein the processing unit computes the metric from a phase error signal produced by a delay lock loop, matched filter, or correlator in a receiver unit in one of the stations.

29. (Original) The apparatus as claimed in Claim 28, wherein the metric is a function of a statistic of the phase error signal.

30. (Original) The apparatus as claimed in Claim 29, wherein the statistic is variance.

31. (Original) The apparatus as claimed in Claim 21, wherein the processing unit computes the metric from a frequency error signal in a frequency control loop in a receiver unit in one of the stations.

32. (Original) The apparatus as claimed in Claim 31, wherein the metric is a function of a statistic of the frequency error signal.

33. (Original) The apparatus as claimed in Claim 32, wherein the statistic is variance.

34. (Original) The apparatus as claimed in Claim 21, wherein the processing unit further compares the metric to a threshold level.

35. (Currently Amended) The apparatus as claimed in Claim 21, additionally comprising an antenna having an antenna mode that is capable to be changed and wherein the compensator changes an antenna mode.

36. (Original) The apparatus as claimed in Claim 35, wherein the antenna mode changes from directive to omni-directional.

37. (Original) The apparatus as claimed in Claim 35, wherein the antenna mode changes from omni-directional to directive.

38. (Currently Amended) The apparatus as claimed in Claim 21, wherein the at least one parameter includes at least one of the following: a data transfer rate, a power level, an FEC coding rate, a modulation attribute, or an antenna characteristic.

39. (Currently Amended) The apparatus as claimed in Claim 38, wherein the compensator reduces at least one of the following to a minimum level: the data transfer rate, the FEC coding rate, or the modulation attribute.

40. (Original) The apparatus as claimed in Claim 21, wherein the modulation attribute includes amplitude, frequency, phase, or combination thereof.

41.   (Original) In a communication system having a signaling path in a wireless link between a first station and a second station, an apparatus for adapting to rapid changes affecting the signaling path, comprising:

in at least one station, means for calculating a metric indicative of a changing environment between the first and second stations as a function of a change in at least one modulation attribute of a signal transmitted across the wireless link between the first and second stations; and

means for adjusting a least one parameter affecting the performance of the wireless link to compensate for the rapid changes affecting the signaling path.

42.   (Currently Amended) A computer-readable medium having stored thereon sequences of instructions, the sequences of instructions including instructions, when executed by a processor, causes the processor to <u>control a signaling path in a wireless link between a first station and a second station, to adapt to rapid changes affecting the signaling path, the instructions further causing the processor to</u> perform:

in at least one station, calculating a metric indicative of a changing environment between the first and second stations as a function of a change in at least one modulation attribute of a signal transmitted across the wireless link between the first and second stations; and

adjusting a least one parameter affecting the performance of the wireless link to compensate for the rapid changes affecting the signaling path.